

WHAT IS CLAIMED IS

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1. An apparatus for printing color inkjet images, comprising:

an image processing unit which processes source color data to generate output color data  
10 together with a signal indicative of an order of ink squirts in which a plurality of inks of respective colors are squirted onto a given pixel; and

an inkjet print unit which is configured to squirt the plurality of inks in different orders  
15 of ink squirts, and prints color images based on the output color data by squirting the inks in the order of ink squirts indicated by said signal.

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2. The apparatus as claimed in claim 1, wherein said image processing unit includes:

a lookup table which defines relationships  
25 between the source color data and the output color

data at a plurality of points in a color space; and  
a color correction unit which interpolates  
the output color data at a given point in the color  
space between the data points,

5                wherein said lookup table is configured  
such that some of said points in the color space are  
given two or more sets of the output color data.

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3. The apparatus as claimed in claim 2,  
wherein the two or more sets of the output color  
data are positioned on or near a border between the  
15 different orders of ink squirts.

20                4. The apparatus as claimed in claim 1,  
wherein said image processing unit includes:

image processing units which correspond to  
the different orders of ink squirts, respectively,  
and process the source color data to generate  
25 respective output color data; and

a selecting unit which selects the order  
of ink squirts from the different orders of ink  
squirts, and selects one of said image processing  
units accordingly, thereby outputting the output  
5 color data together with the signal indicative of  
the order of ink squirts.

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5. The apparatus as claimed in claim 4,  
wherein said selecting unit selects the order of ink  
squirts on a page-specific basis.

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6. The apparatus as claimed in claim 4,  
wherein said selecting unit selects the order of ink  
20 squirts on a pixel-specific basis.

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7. The apparatus as claimed in claim 4,

wherein said selecting unit selects the order of ink  
squirts on a block-specific basis.

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8. The apparatus as claimed in claim 4,  
wherein said selecting unit refers to amounts of ink  
consumption required by said inkjet print unit to  
10 print the color images with respect to the different  
orders of ink squirts, and selects the order of ink  
squirts as requiring a least amount of ink  
consumption.

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9. The apparatus as claimed in claim 4,  
wherein said selecting unit refers to a gamut of  
20 colors reproducible by said inkjet print unit with  
respect to each of the different orders of ink  
squirts, and selects the order of ink squirts as  
being optimum in terms of representing a gamut of  
colors of the source color data.

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10. The apparatus as claimed in claim 4,  
5 wherein said selecting unit refers to a mode  
selected by a user, and selects the order of ink  
squirts as being optimum in view of the selected  
mode.

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11. The apparatus as claimed in claim 1,  
wherein said inkjet print unit includes a plurality  
15 of nozzle lines, which are arranged in a main-scan  
direction, and are each comprised of a plurality of  
nozzles arranged in a sub-scan direction, said  
plurality of nozzle lines including two or more  
nozzle lines of the same ink color and at least one  
20 nozzle line of a different ink color between said  
two or more nozzle lines.

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12. The apparatus as claimed in claim 11,  
wherein said plurality of nozzle lines are  
symmetrically arranged in respect of a center axis  
that extends perpendicularly to the main-scan  
5 direction.

10 13. An apparatus for controlling image  
formation, comprising:

an image processing unit which processes  
source color data to generate output color data  
together with a signal indicative of an order of ink  
15 squirts in which a plurality of inks of respective  
colors are squirted onto a given pixel; and

an inkjet print unit which is configured  
to squirt the plurality of inks in different orders  
of ink squirts, and prints color images based on the  
20 output color data by squirting the inks in the order  
of ink squirts indicated by said signal.

14. A method of printing color inkjet images, comprising the steps of:

selecting an order of ink squirts based on source color data;

5           processing the source color data to generate output color data; and

printing color images based on the output color data by squirting inks from an inkjet print head in the selected order of ink squirts.

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15           15. The method as claimed in claim 14, wherein said step of selecting the order of ink squirts includes the steps of:

obtaining a gamut of reproducible colors with respect to each of different orders of ink squirts; and

20           selecting the order of ink squirts based on the obtained gamut of reproducible colors.

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16. The method as claimed in claim 14,  
wherein said step of selecting the order of ink  
squirts includes the steps of:

obtaining amounts of ink consumption  
5 required for printing the color images with respect  
to different orders of ink squirts; and

selecting the order of ink squirts based  
on the obtained amounts of ink consumption.

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17. The method as claimed in claim 14,  
wherein said step of selecting the order of ink  
15 squirts includes the steps of:

obtaining a gamut of reproducible colors  
and amounts of ink consumption required for printing  
the color images with respect to each of different  
orders of ink squirts; and

20 selecting the order of ink squirts based  
on the obtained gamut of reproducible colors and the  
obtained amounts of ink consumption.

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18. A method of printing color inkjet images, comprising the steps of:

selecting an order of ink squirts;

5           switching image processing on source color data in response to the selected order of ink squirts; and

          printing color images based on the image-processed color data by squirting inks in the  
10   selected order of ink squirts.

15           19. The method as claimed in claim 14, wherein said inkjet print head includes a plurality of nozzle lines, which are arranged in a main-scan direction, and are each comprised of a plurality of nozzles arranged in a sub-scan direction, said  
20   plurality of nozzle lines including two or more nozzle lines of the same ink color and at least one nozzle line of a different ink color between said two or more nozzle lines.

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20. The method as claimed in claim 19,  
wherein said plurality of nozzle lines are  
5 symmetrically arranged in respect of a center axis  
that extends perpendicularly to the main-scan  
direction.